

ABSTRACT OF THE DISCLOSURE

A method for calibrating different types of signals scanned from a
5 molecular array or calibrating signals scanned from different molecular arrays by
employing calibrating probes that generate signals proportional to the total
concentrations of labeled target molecules to which the molecular array probes are
directed over an entire range of sample solutions, and molecular arrays incorporating
sets of calibrating probes. For molecular arrays that include oligonucleotide probes
10 directed to cDNA targets produced by reverse transcription of mRNA molecules,
suitable probes for calibrating features include: (1) poly(A) oligonucleotides of
varying lengths; (2) oligonucleotides having sequences complementary to cDNA
copies of cDNA transcripts of Alu repeat sequences in human mRNA molecules; (3)
oligonucleotide probes complementary to arbitrary synthetic sequences incorporated
15 into 5'-end primers used to initiate reverse transcription of mRNA molecules; and (4)
random oligonucleotide probes of varying lengths with high probability of being
complementary to relatively large fractions of target molecules.

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